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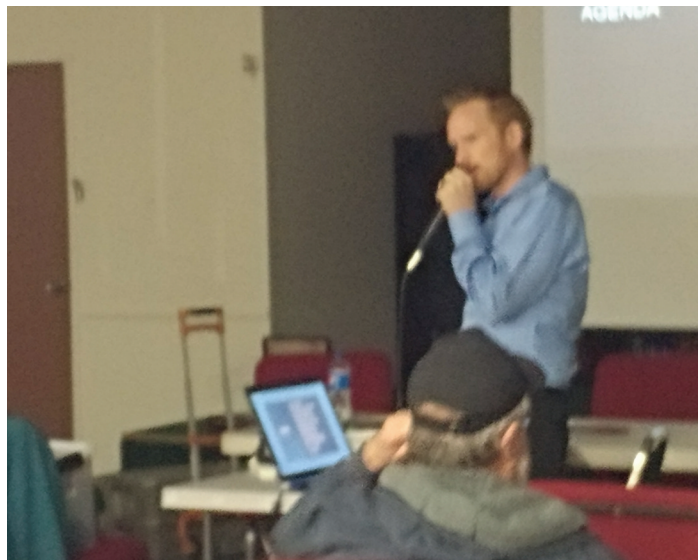
Counterpoise Editor - Sue Robins AF6LJ

Introduction To DMR

By Sue Robins AF6LJ Pictures by Patrick Gooden K6PFG

Our April presentation was by Brian Slosson KC2GNV an introduction to DMR. The presentation started with the basics and differences between analog and DMR. Brian provided a video that dramatically demonstrated DMR's noise immunity, and how little signal is needed to maintain communications.

DMR is a little different from analog radio in a few key ways. One of these key differences is; everyone on the system is identified, either by their Unit ID or by their Callsign which acts as an alias in the system to make it easy for we humans to identify each other. DMR identifies you by a unique number you must apply for, that is your Unit ID and can be used in as many radios as you own that are DMR capable. DMR, like analog radio works simple, and works on specially configured repeaters. Anything you can do with an analog repeater you can do on a DMR repeater, except for two things. 1. 2 conversations can occur at the same time due to DMR's use of a transmission mode 2. You cannot anonymously interfere with someone, you cannot jam without the radio, and you being identified. Needless to say that when Denny Dim-whit gets the urge to stir things up, he will be identified for all to know as his ID number, or callsign flashed across everyone's radio display. While good old fashioned A3, A1, and F3 type emission (AM, FM, and CW), are the most fundamental ways we as Hams communicate, DMR isn't going away municipalities, state, and Federal agencies, along with tens of thousands of private businesses use DMR every day. Surplus gear and other forms of support will be with us for decades to come. *****

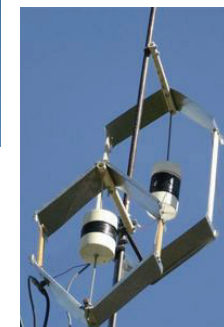


ARCEC Repeater Frequencies

2 Meter Repeater	220 MHZ Repeater	440 MHZ Repeater
TX 146.475	TX 222.480	TX 440.900
RX 147.420	RX 224.080	RX 445.900
Offset .945	Offset 1.6	Offset 5.00
PL 107.2	PL 107.2	PL 107.2



Rich NJ6F Shows Us His Shack



Show Us Your Shack

I have had my radios all spread out in the past but all that did was collect dust... but now decided to mount them in plastic go kits with 8.5 x 11 metal letter snap together desk paper holders as shelves that allow easy pull out of entire stack for wiring and servicing of radio equipment. As you can see there are two plastic boxes, one on top for receive equipment and bottom one for transmitters and supplies etc., for a bit of isolation.

- Two photos of my main HF station with FT-100-D transceiver, Kantronics PK3 digital modem modified with USB, ANC-4 phase noise canceller, HF ground tuner, CW and voice keyers, signal link for digital, Kenwood phone patch modified wired for every microphone I have, MFJ brick wall filter/DSP with stereo synthesizer expander and pair of 10 watt Radio Shack audio amps off to the side with 4 band equalizer. Backside JPG showing containers and dual 6 VDC 210 Ah back up batteries in series as back -up power with my 25 amp MFJ 13.8 booster and other batteries and have a slew of laptop computers. My car has another FT-100-D transceiver with a TYT 65 watt 220 rig, CB and 25 watt marine radio.
- Photo of 220 IC-37 with a 45 and 75 watt 220 amp and DMR/FM TYT MD-9600 50 watt dual band equipment.
- Photo of Main HF amp MLA-2500B with pair of 8875 ceramic tubes 1.5KW @ 220V each of two tubes does 1KW out with 20 watts of drive and stay cool, no heating up the shack only 5 inches tall !
- Photo of MLA-3000 tuner 3KW
- Photo of outdoor antennas – HI-Q HF 10-80 screwdriver with capacity hat and 7' extension, 75 meter Isotron and CCD Dipole with silver mica caps every 3 feet for gain on 40 and 20, also not shown have 3 magnetic loops for HF, 40, 75 & 160 Isotrons, HF9V with 160 butternut vertical and Arrow 440/2-meter satellite antenna handheld etc.
- My two ham stations in Howell, NJ when I was a sophomore in High School 1st station with BC-312, home brew down converter for 10 & 15, Eico 720 transmitter with 30 watt AM modulator and home brew HF 811 amp.
- Second station same place with rare Yaesu FL-1000 linear, FR-100B receiver & FL-100B transmitter all with SSB, AM and CW together with 40 foot 2 piece tower, prop pitch rotor to TA-33.
- My Dad, Herbert's receive station in Dresden, Germany 1922 !!! He worked a month to buy a tube in those days.
- My 8 foot Delta kite flown at 200 feet with RG-174 coax dropping down to my car in East Mission Bay with

Ham Radio Volunteers Needed to Support The SD100 The Afternoon and Evening of Friday, June 7, 2019

If you are looking for a radio training opportunity, volunteers are needed the afternoon and evening of Friday, 6/7/19 to support communications at Aid Stations along the course of the San Diego 100 Mile Ultra Endurance Run. Although this is not an ARES, ACS, or SWREACT event, the event provides back country operating experience under tough conditions in the Cuyamaca and Laguna Mountain Ranges. Some Aid Stations are accessible by paved road; other Aid Stations require a high-clearance vehicle. For runner safety, Ham radio volunteers help track the bib numbers of runners as they pass through Aid Stations that have no reliable cell phone service. Some shifts start on Friday, June 7 at 1400 and end by midnight. Other shifts start later and are overnight shifts. We assign about five hams to each Aid Station.

To volunteer, or for more information, contact K6RJF.ROB@gmail.com.

Thank you,
Rob
K6RJF

Next Month's Meeting To Be Announced

WAMO Net Rebirth

Steve AJ6IT has brought the Wednesday WAMO Net back from its long hibernation. The WAMO Net is a controlled net for members, and non-members of the Amateur Radio Club of El Cajon. The net meets every Wednesday starting with early check-ins at 7:45 PM Pacific time. Come and join us for the WAMO net.

Club Shirts & Jackets

We have green, pocketed 2013 Field Day club shirts available in sizes S (2), M (1), and L (8) for \$10 each. Our standard Club Shirts have no pocket and are in sizes M (10), L (4), 2XL (7), 3XL (4), 4XL (5) for \$10 each. Sizes are limited to stock on hand.

Lined Windbreaker Jackets are also available in sizes L (1) and XL (7) for \$24 each. These have side pockets with snap closure.

ARRL Field Day 2019



Support Our Local Businesses



Membership Badges & Pins

All members of the Amateur Radio Club of El Cajon who might wish to obtain a membership badge can contact Dell Awards and place an order with them. They are our current preferred source for these badges, and have our logo and design on file and ready to create a custom badge for members. Current price is \$7.50 per badge and they have indicated that there is normally a 3 business day turnaround time. These are quality badges made by a long established company, so place yours on order soon. They can be reached at the below address and phone number, and be sure to mention you saw this blurb in the Counterpoise newsletter too.

Dell Awards

7949 Broadway

Lemon Grove, CA 91945

(619) 469-2100

Hours: Mon-Fri 9:30am-5:30pm

Sat 10am-1pm

Sun - Closed

Club Pins Now Available:

They have arrived! A limited number of club pins are now here and can be obtained from our Treasurer at most club functions. These are 1" diameter pins with a rubber clutch pin on rear. You can now show the world your support of the Amateur Radio Club of El Cajon, and for the small cost of \$3.00 each too. Get them while they are available.



INTERNATIONAL STYLE ON-FOOT T-HUNT

Saturday May 18th, 2019

Guajome Regional Park, Oceanside, CA 92057

Sponsored by the San Diego T-Hunt Group & CQ Magazine World Wide Fox Hunting Weekend

Starting times will be 10:30 AM to 1:30 PM at 5 minute intervals. If you start at 1:30 you will have until 3:00 to complete the course. **NO REGISTRATION FEES!** There will be 5 hidden T's using the MOE-MOI-MOS-MOH-MO5 format. You will be issued a "Punch card" and there will be orange & white flagging tape at each punch located close to the T's which will be concealed. Antennas will all be vertically polarized with approximately the same radiated power from each "T". For information on "International Style Transmitter Hunting" you may go to Joe Moell, k0ov's excellent website..... www.homingin.com/#toc . We will have limited equipment for loan for those that do not have small 2-M beams. Bring a connector to go from your HT antenna connector to a BNC cable (Chinese HT's not recommended). There will be experienced Hams present to demonstrate techniques for those that want to learn about "On-Foot" Amateur Radio Direction Finding (ADRF) and a "Practice T" to experiment with before you start the course. You do not need a Ham Radio License to participate! You will be issued a map of the area with major features delineated. A compass, clipboard and pencil may be handy to plot bearings with. Dress appropriately and plan on taking water with you while hunting. There are several restrooms in the Park.

A BBQ is planned for about 2:00 PM for those interested. We will have burgers & hot dogs, buns, condiments, potato salad, drinks, chips & salsa. BBQ donations can be made on site. If you are staying for BBQ you might want to bring a folding chair. For information contact :

Joe Corones, N6SZO @ H-858.484.3582, C-858.603.5545, jcorones@gmail.com OR... ..
Joe Loughlin, KE6PHB @ H-619.461.7845, C-619.403.3149, ke6phb@cox.net

Directions: From Interstate 5 in Oceanside take Hwy 76 east about 6 ½ miles to Guajome Lake Rd., turn right onto Guajome Lake Rd. and Park entrance will be first turn on your right. There is a \$3.00 day use parking charge. If you would like to walk into the Park you will have to pass the Park entrance and go about 300 yards further south for free street parking. We will be located by the restrooms on the right as you enter the Park. Look for signs/banner for T-Hunting. Coordinates are 33 14' 45.71" N, 117 16' 21.03" W.

COME OUT AND EXPERIENCE A DIFFERENT ASPECT OF HAM RADIO





The **AMATEUR RADIO CLUB OF EL CAJON**^{Inc.}
WA6BGS

Post Office Box Fifty, El Cajon California 92022

Founded 1960 ~ Incorporated 1976

Please fill out this form and then see options at bottom for submitting to the club

Date of application: ___ / ___ / ___

Amount Paid: \$ _____ Cash Check Check # _____

Membership Type: Individual (\$20/year) Family* (\$35/year)

Membership Status: New Renewal Returning Member

Call Sign First Name _____ Last Name _____

If a previous member, what was your WAMO number?

ARRL Member: Yes No

License Class: Technician General Extra Other

Email Address (required) _____

Phone Number (optional) _____

**Use another sheet of paper to add Family members and please include the following information:*

First Name, Last Name, Call Sign (if any), License Class, Wamo Number (if any), & Email Address.

Submitting this form:

To submit this form, you can mail it to:

**Amateur Radio Club of El Cajon
P.O. Box 50
El Cajon, CA 92022**

-OR-

Bring it to the next club meeting on the second Thursday of each month. You can find the date and location by getting online at www.wa6bgs.us which is the club website. Check it out for the most current information regarding the club.

Cash Payments - Get a receipt from the Club Treasurer. Please make all checks payable to AMATEUR RADIO CLUB of EL CAJON, Incorporated. Receipts for payments by check will be sent by email or regular mail by the Club Treasurer.

Members with an FCC Call Sign are full members with voting privileges. Members without an FCC Call Sign are Associate members without voting privileges.

YOUR DUES ARE TAX DEDUCTIBLE: Amateur Radio Club of El Cajon, Inc. Is a 501 C 7 Corporation. Donations are NOT tax deductible.

Email address and phone number are to allow club officers to contact members regarding club business and information of interest.